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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/367,670	10/18/1999	MICHAEL COVELEY	SIM0065	4624

7590 02/12/2004

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EXAMINER	
ODLAND, DAVID E	
ART UNIT	**PAPER NUMBER**
2662	15

DATE MAILED: 02/12/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/367,670	COVELEY ET AL.	
	Examiner	Art Unit	
	David Odland	2662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE ____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 November 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-13,20-23,25,27-30 and 32-38* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-5,7-13,20-23,25,27-30 and 32-38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. The following is a response to the amendments filed on 11/17/2003.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 9,20,30 and 32-35 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Specifically, the claims recite that the knowledge base is 'self-updating' (referring to claims 30 and 32) and that the messages sent over the landline network are 'only API message bodies' (referring to claims 9 and 20). However, the specification did not previously describe such a 'self-updating' knowledge base and 'API message body' only configuration in such a manner that would convey that the inventor had possession of these claimed limitations at the time of filing.

Claims 33-35 are rejected because they depend on rejection claims.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

5. Claims 30 and 32-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 30 and 32, recite that the knowledge base is 'self-updating'. This limitation is confusing. Any database (or 'knowledge base') must be implemented in some computer system, which must have elements for with it uses and relies on to perform update operations. Some of the elements may include a CPU, memory, a bus, etc.. Therefore, it is unclear how the knowledge base can be 'self-updating' and which aspects of the updating process is the knowledge base performing by itself.

Claims 33-35 are rejected because they depend on rejection claims.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 1-5,7-13,20-23,30,32-34,36 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over European Patent number 0 777 394 A1 to Belpaire, hereafter referred to as Belpaire, in view of Krishnan (USPN 6,157,950), hereafter referred to as Krishnan.

Referring to claims 1, 10, 30, 32-34,36 and 37 Belpaire discloses a communication system comprising:

at least two communication networks over which communications between physical devices connected to said communication networks are to be carried (two terminals communicate with each other over the Internet and a GSM network (see figure 1)) , said communication networks implementing different protocols for messaging (the internet is a land-line network and the GSM network is wireless (see figure 1)); and

a communication server acting between said communication networks and through which messages transmitted between said communication networks pass (a mail service gateway (MSG) is located between the two networks and the communications messages pass through it (see figure 3 and abstract)), said communication server including a self-updating knowledge base storing protocol conversion information (the MSG includes destination translating means (DTM) which accesses a translation table memory (TM) that the system inherently updates with translation information (see column 7 lines 20-59 and figure 1)), said communication server accessing said knowledge base upon receipt of a message (the DTM searches the TM for associated destination translation (see column 7 lines 20-59)), said communication server accessing said knowledge base upon receipt of a message (the TM is accessed upon receipt of a message (see figure 1 and column 6 lines 1-18 and column 7 lines 20-59)) and searching said knowledge base for appropriate protocol conversion information using a header of said message as a key to searching said knowledge base for said protocol conversion information (the header of the message is used to search the TM for the appropriate address translation (see figure 1 and column 6 lines 1-18 and column 7 lines 20-59)) and said communications server converting the protocol of the received message to a protocol compatible with the communication network to which said message is being sent using the determined protocol conversion information (the

DTM uses the appropriate translation address from the TM that is associated with the wireless terminal in the GSM network to convert to the appropriate format (see figure 1 and column 6 lines 1-18 and column 7 lines 20-59)). Note, regarding claim 32, Belpaire discloses that the networks are a wireless (GSM) and wired (Internet) networks.

Belpaire does not disclose that if a search using the header of the message fails then information from the body of the message is used to search for the appropriate conversion information. However, Krishnan discloses a system wherein a gateway computer is used by a LAN to access the Internet and for hosts on the Internet communicate with users on the LAN (see figure 3)), wherein when an incoming packet is received the gateway uses the destination IP address and port number, which are on the header of the packet, to search a database for the appropriate destination address of the host on the LAN (see figures 3-5b and column 8 line 40 through column 9 line 60). When a search of the database fails the gateway can look into the body of the incoming packet (i.e. an e-mail message for example) and use the email address in the message to search for the appropriate destination address (see figures 3-5b and column 8 line 40 through column 9 line 60). It would have been obvious to one skilled in the art at the time of the invention to implement this feature in the Belpaire system wherein if a search of the TM fails the system can use information in the body of the packet to find the conversion information, because doing so would make Belpaire more reliable by allowing these other means for delivering the messages. Note, regarding claim 33, the 'first pass' corresponds to the gateway searching for the destination IP address and the 'second pass' corresponds to the gateway using the users email address to look-up the destination. Also, regarding claim 34, the users email address in the email message 'header' (see column 9 line 31), thus it can be considered a 'second header'. Note,

regarding claim 37, the 'virtual header' corresponds to the header in Krishnan that has the IP address that is used for the search and the 'logical header' corresponds to the email message header, which is used for the search when the IP address search fails.

Referring to claim 2, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that the communication server includes virtual devices communicating with said communication networks (the MSG inherently comprises receiving and transmitting devices that interface the terminals of the Internet and GSM networks (see figure 1)) and a virtual gateway bridging said virtual devices (the MSG acts as a gateway between the Internet and GSM networks (see figure 1)), said virtual gateway accessing said knowledge base and converting protocols of said messages (the MSG accesses the TM and converts the land-line Internet message to a wireless GSM message (see figure 1 and abstract)).

Referring to claim 3 and 11, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that the virtual gateway includes a preprocessor, a processor and a postprocessor (the MSG comprises a filter means F (preprocessor), destination translating means DTM (processor) and embedding means E (postprocessor) (see figure 1 and column 4 lines 45-59)), said preprocessor examining each incoming received message to locate target logical connection information determining the target destination for said incoming message (the filter filters out from each received message, the overhead information that indicates target destination information (see column 6 lines 10-18)), said target logical connection being used as said key (the header information is used for searching the TM (see column 6 lines 10-18)), said processor converting the protocol of each incoming message, where appropriate (the DMT converts the message (see column 9 lines 20-32)), if required for transmission to the communication network

to which said message is being sent based on results of the search using said target logical connection information, said postprocessor wrapping each message received from said processor with headers, where appropriate (the embedding means is used to completes the message to be outputted to the wireless network (see column 7 lines 20-59)).

Referring to claim 4, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that one of said communication networks is a wireless network (one network is a GSM network (see figure 1)) and wherein one of said communication networks is a wired land-line network (one network is the Internet (see figure 1)).

Referring to claim 5, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that messages transmitted over said wireless network, include API message bodies to be processed by destination physical devices (the messages transmitted to the wireless terminals are email messages containing text and data objects such as figures, tables and pictures (see column 6 lines 19-27)) and logical message headers including target logical connection information specifying the destinations for said API message bodies, said logical message headers wrapping said API message bodies (the messages contain addresses indicated which wireless terminal the are to be transmitted to (see column 7 lines 20-59)).

Referring to claim 7, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that the preprocessor strips the logical message header from the API message body upon receipt of a message from the wireless network and uses the target logical connection information in the logical message header as said key to search the knowledge base for the protocol conversion information (the reverse process is performed for messages sent in the

opposite direction (i.e. form wireless terminal to a landline terminal) (see column 8 lines 40-59 and column 9 lines 1-5)).

Referring to claims 8 and 21-23, Belpaire discloses the system discussed above. Belpaire does not disclose that the preprocessor analyzes the API message body upon receipt of a message received from said wireless network for said target logical connection information if said target logical connection information cannot be determined from said logical message header and uses the target logical connection information in said API message body as said key for searching the TM. In fact, Belpaire discloses that the incoming message is stripped down to its 'naked' form wherein all header information is sent to the DMT for destination address translation and the raw data is processed by processing means P (see column 6 lines 10-22). This system is flawed in that if the header information is corrupt and the destination address cannot be determined the raw data may be lost. However, as mentioned above, Krishnan discloses a system wherein a gateway computer is used by a LAN to access the Internet and for hosts on the Internet communicate with users on the LAN (see figure 3)), wherein when an incoming packet is received the gateway uses the destination IP address and port number, which are on the header of the packet, to search a database for the appropriate destination address of the host on the LAN (see figures 3-5b and column 8 line 40 through column 9 line 60). When a search of the database fails the gateway can look into the body of the incoming packet (i.e. an e-mail message for example) and use the email address in the message to search for the appropriate destination address (see figures 3-5b and column 8 line 40 through column 9 line 60). It would have been obvious to one skilled in the art at the time of the invention to implement this feature in the Belpaire system wherein if a search of the TM fails the system can use information in the body of the packet to find the conversion

information, because doing so would make Belpaire more reliable by allowing these other means for delivering the messages.

Referring to claim 9, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that the messages transmitted over said land-line network only include API message bodies (the messages transmitted over the Internet are email messages (see figure 1 and abstract)), said preprocessor analyzing the API message body upon receipt of a message received from said land-line network for said target logical connection information (the filter of the MSG separates the header information, which contains addressing information, from the message and sends it to the DMT (see column 6 lines 10-27)) and using the target logical connection information in said API message body as said key to search said knowledge base for said protocol conversion information (the DMT uses the destination address to look up in the TM the associated wireless terminal address to convert the message into wireless form and send it to the wireless terminal (see column 7 lines 20-59)).

Referring to claim 12, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that the system includes a tool kit to setup said knowledge base with said protocol conversion information (inherently, the system comprises software and/or hardware to implement the TM so that the DMT can search for the necessary information (see figure 1 and column 7 lines 20-59)).

Referring to claim 13, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that the virtual gateway updates said protocol conversion information based on message traffic (inherently, since the gateway links the Internet and GSM networks and these are dynamic networks that grow and shrink in terms of the number of users/terminals, the

gateway must have means for updating the translation information in the TM according to the traffic it receives from new users/terminals).

Referring to claim 20, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that the messages transmitted over said land-line network only include API message bodies (the messages from the landline terminal is an email message (see column 5 lines 52-59)), said preprocessor analyzing the API message body upon receipt of a message received from said land-line network for said target logical connection information (the filter means F filters out the destination address information to send it to the DMT (see column 6 lines 10-18)) and using the target logical connection information in said API message body as said key to search knowledge base (the DMT uses the destination address it receives from the filter in order to search the TM for the corresponding wireless terminals address (se column 7 lines 20-59)).

8. Claims 25,27,28,35 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Belpaire in view of Crowe et al. (USPN 5,970,488), hereafter referred to as Crowe.

Referring to claims 25,35 and 38, Belpaire discloses a communication server acting as a gateway for the transmission of messages between two virtual devices communicating with networks implementing different protocols (an MSG acting as a gateway for two terminals communicating with two different network protocols (see figure 1)), said communication server comprising:

a knowledge base storing protocol conversion information to convert messages of one protocol to a different protocol (the MSG comprises a TM for storing corresponding destination address information (see figure 1 and column 7 lines 20-59)); and

a virtual gateway accessing said knowledge base for protocol conversion information upon receipt of a message to be transmitted between said virtual devices (the MSG retrieves the address translation information from the TM (see figure 1 and column 7 lines 20-59)) and converting the protocol of said message to a protocol compatible with the network to which said message is being sent (the MSG converts the messages between the wireless and landline protocols (see figure 1)).

Belpaire does not disclose that the virtual gateway updates the protocol conversion information in said knowledge base based on message traffic there through. However, Crowe discloses a system wherein a databases at nodes are updated depending on messages that they receive (see column 4 lines 47-65). It would have been obvious to one skilled in the art at the time of the invention to implement this feature in Belpaire because doing so would make Belpaire more reliable and user friendly since such a configuration would allow for the databases to be updated automatically.

Referring to claim 27, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that one of said networks is a wireless network and wherein another of said networks is a wired land-line network (one network is a GSM network (see figure 1)) and wherein one of said communication networks is a wired land-line network (one network is the Internet).

Referring to claim 28, Belpaire discloses the system discussed above. Furthermore, Belpaire discloses that the virtual gateway unwraps headers accompanying incoming messages (the MSG uses a filter F to unwrap header information (see column 6 lines 10-18)) and uses target logical connection information in the headers as keys to search said knowledge base for said protocol conversion information (the destination address in the header is used to look up the corresponding address of the wireless terminal that the message is being sent to (see column 7 lines 20-59)).

9. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Belpaire in view of Crowe and further in view of Krishnan.

Referring to claim 29, Belpaire discloses the system discussed above. Belpaire does not disclose that the bodies of the incoming messages are analyzed if the target logical information cannot be determined from the headers. However, Krishnan discloses a system wherein a gateway computer is used by a LAN to access the Internet and for hosts on the Internet communicate with users on the LAN (see figure 3)), wherein when an incoming packet is received the gateway uses the destination IP address and port number, which are on the header of the packet, to search a database for the appropriate destination address of the host on the LAN (see figures 3-5b and column 8 line 40 through column 9 line 60). When a search of the database fails the gateway can look into the body of the incoming packet (i.e. an e-mail message for example) and use the email address in the message to search for the appropriate destination address (see figures 3-5b and column 8 line 40 through column 9 line 60). It would have been obvious to one skilled in the art at the time of the invention to implement this feature in the

Belpaire system wherein if a search of the TM fails the system can use information in the body of the packet to find the conversion information, because doing so would make Belpaire more reliable by allowing these other means for delivering the messages.

Response to Arguments

10. Applicant's arguments with respect to the previous Office Action rejections have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Odland, who can be reached at (703) 305-3231 on Monday – Friday during the hours of 8am to 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou, can be reached at (703) 305-4744. The fax number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist, who can be reached at (703) 305-4750.

deo

February 6, 2004

JOHN PEZZLO
PRIMARY EXAMINER